

MPHAB-B

METER, PH

1. GENERAL. This procurement requires a digitally-indicating, temperature-compensated, pH meter.

2. CLASSIFICATION. Type II, Class 5, Style EP or ES, and Color R in accordance with MIL-T-28800 for shipboard applications.

3. OPERATIONAL REQUIREMENTS. The equipment shall be capable of measuring and indicating pH, millivolts, and temperature (°C) in accordance with the following specifications. All electrodes, buffer solutions, and other accessories required to meet these specifications shall be supplied with the meter in a Style P or S transit case.

3.1 pH measurement. Range: 0 to 14. Resolution: 0.001. Accuracy of measurement: ± 0.02 .

3.2 Millivolt measurement. Range: ± 1999.9 mV. Accuracy: The greater of ± 0.2 mV or $\pm 0.05\%$ of indication.

3.3 Temperature. Range: -5 to 105°C. Resolution: 0.1°C. Accuracy: $\pm 1^\circ\text{C}$.

3.4 Buffer solutions. 475 ml (16 oz) each of pH 4, pH 7, and pH 10 solutions shall be provided for periodic calibration of the meter and electrode combination.

3.5 Temperature compensation. Automatic compensation from 0 to 50°C.

3.6 Digital display. 5-digits minimum.

4. GENERAL REQUIREMENTS.

4.1 Power source. MIL-T-28800 nominal power source requirements are invoked. Operation at 400 Hz is not required. Maximum power consumption: 5W.

4.2 Weight. 3.2 kg (7 lb) maximum, including transit case and all accessories.

4.3 Lithium batteries. Per MIL-T-28800, lithium batteries are prohibited without prior authorization. A request for approval for the use of lithium batteries, including those encapsulated in integrated circuits, shall be submitted to the procuring activity at the time of submission of proposals. Approval shall apply only to the specific model proposed.

4.4 Transit case. The Style P or S transit case shall provide protection to the meter and have specific positions for each component of the pH measurement system. The case shall be in compliance with the transit case requirements set forth in MIL-T-28800.